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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO.       |
|---|-------------|----------------------|--------------------------------|------------------------|
| 10/063,180  | 03/28/2002  | Robert D. Barnes     | 121756                         | 4753                   |
| 23446 7590 10/18/2007<br>MCANDREWS HELD & MALLOY, LTD<br>500 WEST MADISON STREET<br>SUITE 3400<br>CHICAGO, IL 60661 |             |                      | EXAMINER<br>COBANOGLU, DILEK B |                        |
|   |             |                      | ART UNIT<br>3626               | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>10/18/2007        | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                                       |                                      |  |
|------------------------------|---------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/063,180  | <b>Applicant(s)</b><br>BARNES ET AL. |  |
|                              | <b>Examiner</b><br>Dilek B. Cobanoglu | <b>Art Unit</b><br>3626              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/21/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This is a communication in response to the amendment received on 08/07/2007.

Claims 1-17 remain pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12, 14, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1), Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166) and further in view of Hu et al. (hereinafter Hu) (U.S. Patent Publication No. 2003/0126279 A1).

A. As per claim 1, Wong discloses apparatus for providing information processing, management and communication functions in a healthcare environment, said apparatus comprising:

- i. a database server (Wong; col. 12, line 65 to col. 13, line 5);
- ii. a radiology information system (RIS) database (Wong; col. 7, lines 59-64 and col. 8, lines 15-20);
- iii. a picture archive and communication system (PACS) database (Wong; col. 7, lines 59-64 and col. 8, lines 15-20); and

- iv. a database engine residing on said database server to manage said RIS database and said PACS database (Wong; col. 8, lines 15-28).

Wong fails to expressly teach the (RIS) and (PACS) databases residing on database server. However, this feature is well known in the art, as evidenced by Moshfeghi.

In particular, Moshfeghi discloses a (RIS) and (PACS) databases residing on database server (Moshfeghi; col. 2, lines 50-54, Fig. 1). It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Moshfeghi with the motivation of a user only see the information that he/she is privileged to access (Moshfeghi; col. 5, lines 11-12).

Wong and Moshfeghi fail to expressly teach a brokerless interface between said RIS database and said PACS database. However, this feature is well known in the art, as evidenced by Hu.

In particular, Hu discloses a brokerless interface between said RIS database and said PACS database (Hu; paragraphs: 0022 and 0058).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Hu with the motivation of facilitate integrating PACS

and RIS without significantly increasing intranet network traffic (Hu; paragraph: 0022).

B. As per claim 2, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of RIS application modules (Wong; col. 8, lines 15-28);
- ii. a set of PACS application modules (Wong; col. 8, lines 15-28); and
- iii. an application server running at least a subset of said set of RIS application modules and said set of PACS application modules (Wong; col. 6, line 65 to col. 7, line 15).

C. As per claim 3, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 6, line 65 to col. 7, line 15); and
- ii. at least one Web connection interfacing said application server to at least one client workstation, said at least one client workstation being external to said apparatus (Wong; col. 8, lines 53-64, Fig. 1).

D. As per claim 4, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a TCP/IP protocol-based interface connecting said application server to said database server thus providing access to information from said database server (Wong; col. 8, lines 53-64).

E. As per claim 5, Wong discloses the apparatus of claim 1 further comprising:

- i. at least one image server storing image data (Wong; col. 3, lines 42-46); and

ii. at least one TCP/IP protocol-based interface connecting said database server to said at least one image server thus providing access to said image data from said at least one image server (Wong; col. 8, lines 53-64).

F. As per claim 6, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of RIS application modules that are disabled (Wong; col. 8, lines 15-30);
- ii. a set of PACS application modules that are enabled (Wong; col. 8, lines 15-30); and
- iii. a Health Level Seven (HL7)-based interface providing communication between said set of PACS application modules and a RIS system that is external to said apparatus (Wong; col. 7, lines 59-62).

G. As per claim 7, Wong discloses the apparatus of claim 1 further comprising:

- i. a set of PACS application modules that are disabled (Wong; col. 8, lines 15-30);
- ii. a set of RIS application modules that are enabled (Wong; col. 8, lines 15-30); and
- iii. a standard medical communications interface providing communication between said set of RIS application modules and a PACS system that is external to said apparatus (Wong; col. 8, lines 15-30).

H. As per claim 8, Wong discloses The apparatus of claim 1 further comprising:

- i. an application server, wherein said application server is an Enterprise JavaBeans (EJB)-based server (Wong; col. 8, line 65 to col.9, line 15, lines 38-41);
  - ii. a set of RIS application modules running on said application server (Wong; col. 3, lines 18-30, col. 8, lines 15-28); and
  - iii. a set of PACS application modules running on said application server (Wong; col. 3, lines 18-30, col. 8, lines 15-28).
- I. As per claim 9, Wong discloses the apparatus of claim 1 further comprising:
  - i. an application server (Wong; col. 7, lines 15-28); and
  - ii. a reporting module running on said application server and being dedicated to the management of diagnostic report functions (Wong; col. 4, lines 16-30).
- J. As per claim 10, Wong discloses the apparatus of claim 1 further comprising:
  - i. an application server (Wong; col. 7, lines 15-28); and
  - ii. an administration module running on said application server and providing system administration and configuration functions (Wong; col. 15, lines 42-54).
- K. As per claim 11, Wong discloses the apparatus of claim 1 further comprising:
  - i. an application server (Wong; col. 7, lines 15-28); and
  - ii. a central logging module running on said application server and providing application logging and audit logging functions (Wong; col. 12, lines 6-19).

L. As per claim 12, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a central user login module running on said application server and providing central user account management support (Wong; col. 12, lines 6-19).

M. As per claim 14, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28); and
- ii. a set of default display protocols (DDPs) stored on said database server and applied to a set of medical images for reading said set of medical images in a pre-defined display format (Wong; col. 14, lines 49-52).

N. As per claim 17, Wong discloses the apparatus of claim 1 further comprising a visual user interface providing a unified and consistent look and feel for both RIS and PACS applications (Wong; col. 14, lines 53-58).

4. Claims 13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1) and Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166), Hu et al. (hereinafter Hu) (U.S. Patent Publication No. 2003/0126279 A1) and further in view of Crane (U.S. Patent No. 5,748,907)

A. As per claim 13, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28);



Wong fails to expressly teach automatic scheduling of procedures for patients. However, this feature is well known in the art, as evidenced by Crane.

In particular, Crane discloses automatic scheduling of procedures for patients (Crane; col. 5, line 60 to col. 6, line 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Crane with the motivation of more efficient manner using fewer people, and operating at lower costs in less time (Crane; abstract).

B. As per claim 16, Wong discloses the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28);

Wong fails to expressly teach tracking a patient based on a set of ordered procedures. However, this feature is well known in the art, as evidenced by Crane.

In particular, Crane discloses tracking a patient based on a set of ordered procedures (Crane; col. 6, line 56 to col. 7, line 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Crane with the motivation of more efficient manner using fewer people, and operating at lower costs in less time (Crane; abstract).

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (hereinafter Wong) (U.S. Patent No. 6,260,021 B1) and Moshfeghi et al. (hereinafter Moshfeghi) (U.S. Patent No. 6,076,166), Hu et al. (hereinafter Hu) (U.S. Patent Publication No. 2003/0126279 A1) and further in view of Segal et al. (hereinafter Segal) (U.S. Patent Publication No. 2001/0041991A1).

A. As per claim 15, the apparatus of claim 1 further comprising:

- i. an application server (Wong; col. 7, lines 15-28);

Wong fails to expressly teach storing mammography related information and keeping track of notices. However, this feature is well known in the art, as evidenced by Segal.

In particular, Segal discloses storing mammography related information and keeping track of notices (Segal; par. Abstract, 0036, 0124 and Fig.1 and 7).

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the aforementioned limitation as disclosed by Segal with the motivation of provide procurement, storage and management of mammogram records for women who undergo mammography. (Segal; par. 0036).

### ***Response to Arguments***

6. Applicant's arguments filed 08/07/2007 have been fully considered but they are not persuasive. Applicant's arguments will be addressed in the order in which they appear.

A. In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In addition, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

B. In response to applicant's argument about Moshfeghi does not disclose any communication between CPR databases; Hu does not disclose a RIS database, Crane does not disclose neither a PACS nor a RIS, Segal does not disclose a system with both a PACS and a RIS and Segal does not disclose a database engine providing a brokerless interface between a PACS and RIS; Examiner respectfully submits that the claim recites "a database engine residing on said database server to manage said RIS database and said PACS database by providing a brokerless interface between said RIS database and said PACS database", and Wong teaches "an object-oriented system and method for easily and rapidly distributing medical images from existing picture and report storage systems to a plurality of heterogeneous client workstations" (Wong; abstract, figure 1), "CRIE 24 and CIIE 32 are illustrated for purposes of illustration as separate systems collected in Hospital 1 with the interface PAC and RI systems" (Wong; col. 8, lines 15-28). Wong fails to expressly teach RIS and PACS

databases residing on a database server, however Moshfeghi teaches PACS and RIS databases residing on the database server (Moshfeghi; abstract, col. 2, lines 43-54 and figure 1). Wong and Moshfeghi fail to expressly teach a brokerless interface between databases, however Hu teaches "the coordinator 501 (or data engine) coordinates the data transfer between IDS (image diagnostic systems) attached to a local intranet, IDS attached to the hospital intranet, and the central archiving system...According to the present invention, medical image data, once generated by a modality based on signals derived from a patient, will be automatically distributed to all IDS for modality" (Hu; paragraph 0058), Hu continues in paragraph 0061 that "Because there are multiple key-IDS, coordinator 501 is needed to coordinate the communication between general-IDS, key-IDS and the central archiving system, which includes searching the central archiving system to see if the data is present (which is the typical case), and if not, includes searching key-IDS according to their corresponding modality to retrieve the appropriate information. This coordinator 501 comprises a mixture of hardware and software, and may be separate and/or integrated into other components in the system." Examiner considers that the coordinator is the data engine, which coordinates the communication between the medical image databases without a need of a broker since it's automatically distributing the medical image data.

C. In response to Applicant's argument about Hu does not teach an interface between a RIS database and PACS database and Hu does not teach a brokerless interface between any databases; Examiner respectfully submits that Hu teaches "the coordinator 501 (or data engine) coordinates the data transfer between IDS (image diagnostic systems) attached to a local intranet, IDS

attached to the hospital intranet, and the central archiving system...According to the present invention, medical image data, once generated by a modality based on signals derived from a patient, will be automatically distributed to all IDS for modality" (Hu; paragraph 0058) and Examiner considers that there should be an interface since there is a communication between the IDSs.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
8. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dilek B. Cobanoglu whose telephone number is 571-272-8295. The examiner can normally be reached on 8-4:30.
10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 571-272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3626


11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DBC

DBC

A.U. 3626

10/10/2007

  
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